

SYMONS'S MONTHLY METEOROLOGICAL MAGAZINE.

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The late G. J. Symons, F.R.S.

It is impossible to reply individually to the many hundreds of letters which I have received expressing admiration for the life and work of the late Editor of this Magazine and personal sorrow for his loss. I would therefore ask all readers to accept my heartfelt thanks for their expressions of affection for my dear friend and for the cordial manner in which they have consented to aid me in carrying out his wishes.

H. S. W.

THE JUBILEE OF THE ROYAL METEOROLOGICAL SOCIETY.

ON Tuesday, the 3rd of April, the Royal Meteorological Society celebrated its Jubilee, having been founded on the corresponding day in 1850. A Commemoration Meeting was held at 3 p.m., at the Institution of Civil Engineers, Great George Street, Westminster, Dr. C. Theodore Williams in the chair. There was a large attendance, including delegates from a number of other scientific societies. In view of the Jubilee, the late Mr. G. J. Symons, F.R.S., was elected President at the Annual Meeting on January 17th, but owing to a paralytic seizure was obliged to resign the office; he had, however, prepared an address giving a brief history of the Society, which Dr. Williams read, and then added some remarks of his own in appreciation of Mr. Symons, and also on the work of the Society. The address, after referring to early authors and observers, stated that the first English Meteorological Society was founded in 1823, but soon languished and died. A second Society was formed in 1836, which likewise remained in existence only for a few years. The present Society was founded at a meeting at Hartwell House, on April 3rd, 1850, attended by Mr. James Glaisher, Dr. J. Lee, Adl. Smyth, and others, mostly members of the Royal Astronomical Society. This was called the "British Meteorological Society," but in 1866, when a Royal Charter was obtained, the name was changed to "The Meteorological Society." In 1882, Her Majesty the Queen accorded the Society permission to adopt the prefix "Royal." Both Mr. Symons and Dr. Williams referred in some detail to the work done by the Society, and to the investigations which had been

carried out under its auspices. The Society had no habitation of its own until 1872, when a room was engaged at 30, Great George Street, and Mr. W. Marriott became the Assistant Secretary. Owing to the increase of work and the growth of the library, additional accommodation was obtained from time to time, the Society now having a convenient suite of rooms at 70, Victoria Street, Westminster. Dr. Williams, in concluding his address, stated that Mr. Symons had bequeathed to the Society £200, as well as the bulk of his large and valuable meteorological library.

Brief congratulatory addresses were delivered by Prof. J. J. Thomson, F.R.S., on behalf of the Royal Society; by Mr. E. B. Knobel, President, on behalf of the Royal Astronomical Society; by Mr. J. J. H. Teall, F.R.S., President, on behalf of the Geological Society; by Mr. R. C. Mossman, F.R.S.E., on behalf of the Scottish Meteorological Society; and by Mr. A. Wynter Blyth, M.R.C.S., on behalf of the Sanitary Institute. Prof. Dr. G. Hellmann, presented an address from the German Meteorological Society, and also spoke in appreciation of the valuable work done by the Royal Meteorological Society.

As a Memento of the Jubilee, the Council had caused a Bronze Medal to be struck, bearing on the obverse a portrait of Luke Howard, and on the reverse the date of the celebration. A copy of this medal was presented to each of the delegates from the various Scientific Societies.

In the evening a *Conversazione* was held at the Royal Institute of Painters in Water Colours, in Piccadilly, the guests being received by the President and Mrs. Theodore Williams. An Exhibition was arranged in the Banqueting Room, comprising:—Meteorological instruments: Photographs of lightning, clouds, frost, snow, hail, &c.; Apparatus illustrating the formation of a tornado cloud; Alleged "Thunderbolts;" The first Rainfall Map; A Meteorologist's Library, A.D. 1500, &c.

Lantern demonstrations were given in the East Gallery by Mr. T. C. Porter, of Eton, showing the Eclipse of the Shadow of the Peak of Teneriffe by the Shadow of the Earth; by Colonel H. M. Saunders, Clouds; and by Mr. W. Marriott, Meteorological phenomena, and Portraits of Presidents of the Society. The Royal Artillery String Band played during the evening, and short concerts by the "Schartau" Part Singers were given at intervals.

On Wednesday a large party of the Fellows was shown over the Royal Observatory, Greenwich, by the Astronomer Royal, after which they paid a visit to the Painted Hall and Naval Museum at Greenwich Hospital.

In the evening a Dinner was held at the Westminster Palace Hotel, which was numerously attended, the President being in the chair. The toast of "The Royal Meteorological Society" was proposed by Mr. W. N. Shaw, F.R.S. General Sir H. W. Norman responded for the Army; Professor Silvanus Thompson, F.R.S., for "The Delegates," and Dr. Pavy for "The Visitors."

A CURIOUS FACT ABOUT LONDON SUMMERS.

To the Editor of the Meteorological Magazine.

SIR,—The mean temperature of summer at Greenwich (*i.e.*, June, July, August) has fluctuated since 1841 between the extremes $57^{\circ}\cdot4$ (in 1860) and $65^{\circ}\cdot1$ (in 1868), giving an average of $61^{\circ}\cdot2$ for those fifty-nine years.

Suppose we select all summers reaching or exceeding 63° , on the one hand, and all summers reaching or falling below 60° , on the other. Then we obtain the following lists of the nine hottest and the fifteen coolest summers.

Nine Hottest Summers.

Mean Temp.				Mean Temp.			
1.	1868	.....	$65^{\circ}\cdot1$	6.	1876	.....	$63^{\circ}\cdot5$
2.	1859	.....	$65^{\circ}\cdot0$	7.	1893	.....	$63^{\circ}\cdot5$ } <i>e</i>
3.	1846	.....	$64^{\circ}\cdot4$ }	8.	1887	.....	$63^{\circ}\cdot3$
4.	1857	.....	$64^{\circ}\cdot4$ }	9.	1870	.....	$63^{\circ}\cdot2$ <i>e</i>
5.	1899	.....	$64^{\circ}\cdot1$				

Fifteen Coolest Summers.

Mean Temp.				Mean Temp.			
1.	1860	.....	$57^{\circ}\cdot4$	9.	1854	.....	$59^{\circ}\cdot5$
2.	1841	.....	$58^{\circ}\cdot0$	10.	1843	.....	$59^{\circ}\cdot7$ }
3.	1879	.....	$58^{\circ}\cdot5$ } <i>e</i>	11.	1848	.....	$59^{\circ}\cdot7$ } <i>e</i>
4.	1888	.....	$58^{\circ}\cdot5$ } <i>e</i>	12.	1891	.....	$59^{\circ}\cdot8$
5.	1862	.....	$58^{\circ}\cdot8$	13.	1892	.....	$59^{\circ}\cdot8$ }
6.	1882	.....	$59^{\circ}\cdot0$	14.	1844	.....	$60^{\circ}\cdot0$ }
7.	1890	.....	$59^{\circ}\cdot1$	15.	1853	.....	$60^{\circ}\cdot0$ }
8.	1845	.....	$59^{\circ}\cdot3$ <i>e</i>				

Now, it will be observed that the hottest summers are nearly all in years ending with the figures 5 to 9 ; only two exceptions (marked *e*), viz., 1893 and 1870. On the other hand, the coolest summers are mostly in years ending 0 to 4 ; there being four exceptions, 1879, 1888, 1845 and 1848. The exceptions amount to about a fourth in either case. We may note, further, that each of the six decades is represented in both lists.

It would appear that the earlier summers in a decade tend to be cooler, the later summers hotter.

The data previous to 1841 are not so reliable ; but if we admit their evidence, it might be shown (from Buchan's estimated temperatures) that as far back as 1810 at least the same contrast is indicated.

I should be glad, Sir, of some enlightenment as to the cause or causes of this feature in our summer weather.

Yours faithfully,

ALEX. B. MACDOWALL.

ROYAL METEOROLOGICAL SOCIETY.

THE monthly meeting of this Society was held on Wednesday evening, March 21st, at the Institution of Civil Engineers, Great George Street, Westminster; Dr. C. Theodore Williams, President, in the chair.

Reference was made to the loss which the Society had sustained by the death of Mr. G. J. Symons, F.R.S., who had held the office of Secretary from 1873 to 1899, except for the two years 1880-81, when he was President. At the Annual Meeting in January last he was elected President for the second time in order to preside over the Jubilee Celebration of the Society in April. Owing to an attack of paralysis in February, he had to resign, and he succumbed to the disease on March 10th. A vote of condolence with his relatives was passed by the meeting.

Twenty-seven new Fellows were elected, many of them proposed by Mr. Symons. Two Honorary Members were also elected: Mons. Albert Lancaster, Director of the Belgian Meteorological Service, Brussels, and Gen. M. A. Rykatcheff, Director of the Central Physical Observatory, St. Petersburg.

The papers read were:—

THE ETHER SUNSHINE RECORDER, *by W. A. Dines, B.A.*

The instrument is an electrical one, and consists of two parts—the one to be exposed to the sun, and the other, which registers on ordinary paper the amount of sunshine, to be put indoors in any convenient position. A week's trace is registered on each chart, and consists of a series of parallel lines lying over each other on the paper. The recorder can be put on a pole, and when once set up requires no attention. The expense of working the instrument is trifling, and, only requiring 52 charts per year instead of 365, is a very great advantage.

REMARKS ON THE WEATHER CONDITIONS OF THE STEAMSHIP TRACK BETWEEN FIJI AND HAWAII, *by Capt. M. W. C. Hepworth.*

The track followed by steamships differs very largely from that of sailing vessels, but no appreciable difference is found in the weather conditions. In making the passage between the Straits of Juan de Fuca and Honolulu, the first indication of the expected north-east trade wind is found, and preceding it, often by as much as 300 miles, is a long swell from the north-eastward, although the wind previously experienced is frequently from a westerly point. The swell has no wind at its back, and not infrequently it is quite a heavy one. The average rainfall at Honolulu is 35·4 in.; at Fiji considerable more, the mean being 100·6 in. Fiji is also greatly the warmer, the mean temperature being 79°.

COMPARISON BY MEANS OF DOTS, *by A. B. MacDowall, M.A.*

This is a simple method which does not seem to have been much used by meteorologists, but is capable of many useful applications.

THE SNOW AND FLOODS OF FEBRUARY, 1900.

NOTES ON THE SNOW FROM THE NEWSPAPER PRESS.

(CONTINUED).

THURSDAY, FEBRUARY 8TH.

NORTH WALES.—The heaviest fall of S for many years, and a depth of about 7 inches.

DUMFRIESSHIRE.—Heavy fall of S on Thursday night, covering the ground to a depth of 9 inches.

PERTSHIRE.—S began to fall at night on 8th, and covered the ground to an average depth of about 7 inches. At Grantown, the depth is reported as 12 inches, and at Dava as 16 inches.

FORFARSHIRE.—Uniform depth of about 4 inches.

FRIDAY, FEBRUARY 9TH.

NORTHAMPTON.—S began between 10 and 11 on Friday night, and by 10 a.m. on 10th was 6 to 8 inches deep.

BARROW-IN-FURNESS.—The streets were covered with from 8 inches to 1 foot of S, and tramway traffic was completely stopped. Between Barrow and Whitehaven a passenger train stuck fast in a large drift.

WORKINGTON.—Heavy S storm, with L and T. In some streets drifts were 6 ft. deep.

KENDAL.—A S storm of unusual severity, and by 3 p.m. the depth was close upon a foot.

VALENCIA.—On Thursday and Friday S fell to the depth of about 14 inches.

LIMERICK.—Owing to S, the train service was delayed several hours, and telegraphic communication was cut off.

SATURDAY, FEBRUARY 10TH.

MANCHESTER.—S started falling about 11 a.m., and scarcely ceased for 24 hours, and drifts in the streets were 2 and 3 feet deep. On the moorland roads in North Derbyshire there were drifts 6 and 8 ft. deep.

BLACKBURN.—In the afternoon S was lying 6 inches deep, and at Great Harwood it was 8 inches.

HUDDESFIELD.—From shortly after noon on Saturday until early next morning S fell and exceeded a foot in average depth.

BRIGHOUSE.—S commenced at noon on Saturday, and continued until 8 a.m. on Sunday; the average depth being about 18 inches.

HALIFAX.—S 12 inches deep. At Denholme Station an engine had to be dug out of a drift.

BRADFORD.—S began about 1 p.m. on Saturday, and by next morning the roads were covered with not less than 8 inches, and there were drifts more than 3 ft. deep.

KEIGHLEY.—From Saturday noon to Sunday morning S fell to a depth of nearly a foot.

SKIPTON.—During Saturday and Sunday the fall of S was 9 or 10 inches.

YORK.—By midnight, S lay on the ground to a depth of about 8 inches.

HARROGATE.—S began about 11 a.m., and fell for 24 hours, yielding 1'02 in. of water, equivalent to about 12 inches of S.

SCARBOROUGH.—S in many places is a foot deep, and even the sands on the sea shore are covered.

NORTHALLERTON AND WENSLEYDALE.—S began on Friday (9th) afternoon, and fell almost continuously till Sunday afternoon, reaching a depth of 18 inches on the level, and rising in drifts to the tops of the hedges. A good deal of S cutting will have to be done before Thirsk, Osmotherley, Bedale and Stokesley can be reached. A light engine was kept running between Northallerton and Hawes to keep the line open.

SANQUHAR.—Since Saturday there has been much drifting in Upper Nithsdale, and on Monday morning many of the principal roads were completely blocked.

ESKDALE AND LIDDESDALE.—The Langholm branch of the North British Railway had in places as much as 6 ft. of S on it, but was cleared for traffic.

DUNS.—It is about 14 years since such a severe S storm was experienced. The S lies to a depth of fully 20 inches, and many roads are blocked.

GREENLAW.—During Saturday night and Sunday morning there was the heaviest S storm for many years. Great wreaths accumulated in many places, besides the even fall of 7 or 8 inches.

FERMOY.—S fell heavily on Friday night and Saturday, covering the roads to a depth of 10 or 12 inches.

CARRICK-ON-SUIR.—S began on Friday night, and on Saturday drifts were 2 ft. deep.

WEXFORD.—On Saturday morning, about 9.30, a regular blizzard commenced, and in a comparatively short time drifts accumulated to the depth of 7 or 8 feet. The trains had great difficulty in ploughing through the S, and were much delayed.

TUESDAY, FEBRUARY 13TH.

From many parts of the country it was stated that this was the most severe storm since 1881, and mail carts were stopped at innumerable places. The Postal Telegraph authorities gave notice of delay in transmission to all parts of the United Kingdom.

HERTFORDSHIRE.—Light engines had to be kept running to and fro on the Hertford, Luton and St. Albans branch; and on the L. & N.W. main line trains were much impeded, the S being in places 6 ft. deep. The G.N.R. from Hitchin to Cambridge was blocked for several hours by a goods train stuck fast in a drift.

OXFORDSHIRE.—Throughout North Oxfordshire and borders of the four shires the fall of S was very heavy, averaging fully 15 inches, while in the lanes there were drifts from 5 to 10 ft. deep.

OXFORD.—S began about 5 p.m., and 8 or 9 inches had fallen by the morning. Near Woodstock a mail van was abandoned in a deep drift. A drift 5 ft. deep formed on the Witney and Fairford branch rail, and the 7.15 train from Fairford could not run.

CHIPPING NORTON.—S commenced about 4 p.m., and continued till early in the morning, when it lay to a depth of about 9 inches.

NORTHAMPTON.—S began about sunset, and continued till 3 a.m., when the average depth was at least 8 inches, and there were drifts 3 ft. deep.

WILTSHIRE.—Tuesday night's S storm was the most severe for 19 years. The train on the Midland and S.W. junction which left Swindon at 8 o'clock was snowed up near Collingbourne, and the passengers had to remain in it

all night. On the Great Western main line there was no interruption, but the Highworth branch was snowed up. A train ran off the line between Devizes and Savername, where it became imbedded in a drift.

BLANDFORD.—S following the heavy S caused a serious landslip on the Somerset and Dorset line near Blandford, completely blocking the line.

CAMBORNE.—S commenced about noon, and by 5 p.m. 3 or 4 inches had fallen.

NORTH CORNWALL.—The S on the roads was 8 to 10 inches deep, and drifts were from 3 ft. to 4 ft. deep.

WESTON-SUPER-MARE.—S began about 3 p.m., and fell for several hours. The fall did not exceed 9 inches, but drifts were several feet deep.

BATH.—The snowfall on Tuesday night was quite a foot in depth, and several mail carts could not reach the city.

GLOUCESTERSHIRE.—Four military trains from the North to Southampton were diverted via Bath and Templecombe, the line between Cheltenham and Andover being blocked at Andoversford by a train imbedded in drifts.

BISHOPTON, BRISTOL.—S began about 3 p.m., and continued far into the night, the average depth being 8 inches.

THORNBURY.—The S averaged about a foot deep.

FOREST OF DEAN.—S began early in the afternoon and continued for 12 hours. In the morning it lay about 18 inches deep.

GLOUCESTER.—S began to fall about 5 p.m., and by morning was a foot deep.

EVESHAM.—S fell nearly all evening and night to the depth of 8 or 9 inches.

LEAMINGTON.—S at night and in morning of 14th, covering the ground to a depth of from 6 to 8 inches.

MID CHESHIRE.—On Tuesday night there was a fall of 2 inches more S, making a total of 13 inches in 4 days.

BEWCASTLE.—The roads were blocked for miles with S 6 ft. to 8 ft. deep, and cannot be opened for a fortnight.

MONMOUTHSHIRE was visited by a heavy S storm, which covered the ground to a depth of 5 or 6 inches.

NEWPORT (MON.)—S began about 3 p.m., and in 4 hours the streets were covered with a layer 5 inches deep.

BLAENAVON.—About 10 inches of S fell.

PENARTH.—S began early in the afternoon and fell all the evening, covering the ground to a depth of from 6 to 8 inches.

CARDIFF.—In a couple of hours 3 or 4 inches of S fell, and about 6 p.m. the tram-cars ceased running.

PONTYPRIDD AND RHONDDA.—Five or 6 inches of S fell.

ABERDARE.—S fell all the afternoon and evening, covering the ground to the depth of a foot.

DOWLAIS.—A G.W. locomotive was snowed up at Vochriw, and the L. and N.W. train from Merthyr to Abergavenny was unable to proceed beyond Dowlais Top for many hours.

WALES.—S fell heavily in Wales, rendering many roads impassable. Two men were found dead in the S between Aberystwith and Rhayader.

THURSDAY, FEBRUARY 15TH.

Telegraphic communication of London with York, Middlesborough, West Hartlepool, Sunderland and S. Shields ceased at 10.45 a.m.; with Bradford, Leeds and Sheffield at 11 a.m.; and with the Scotch offices and Newcastle at 0.20 p.m.

SOUTH NOTTS.—In the country districts the S lies to a depth of 9 inches.

PEAK DISTRICT.—S fell for 15 consecutive hours, and drifts on the roads are 10 ft. deep. At Dove Holes, on the L. and N.W., an engine stuck in a drift and had to be dug out. The 10.15 from London to Buxton ran into a drift and remained embedded all night.

YORKSHIRE.—Much delay of trains, and the railway up to Rosedale, which had been blocked since Sunday and only just cleared, was again drifted up. The general delay of trains appears to have been due to destruction of telegraph wires as much as to S drifts. For 31 hours there was no telegraphic communication between Edinburgh or Glasgow and London.

SHEFFIELD.—S began about 7 a.m., and fell continuously till 6 p.m., when 7 inches had fallen, making a total depth on the ground of 16 inches.

LEEDS.—At Roundhay six tram-cars were snowed up all night.

SWALEDALE.—A passenger train was snowed up for 6 hours at Catterick.

WENSLEYDALE.—The afternoon mail train was embedded at Aysgarth, and only released after 5 hours' labour by a large gang of men. At Hawes junction the line was blocked about midday and remained closed till next morning.

WHITBY.—The afternoon train from Scarborough failed to get through, and the passengers had to remain in it all night.

TEESDALE.—Roads were blocked in many places on Sunday, Monday and Tuesday, and again on Thursday.

DURHAM.—The passenger train due at Consett at 3.22 stuck fast at East Castle colliery, and a snow plough sent to clear the line and a light engine to help the train also became blocked. The 3.54 p.m. train from Newcastle could not proceed beyond Lintz Green. The afternoon train from Durham to Blackhill was embedded till 2 a.m., and the train which left Blackhill at 2.45 p.m. for Durham was reported stormbound till late on Friday.

SHILDON.—The 2 p.m. train from Shildon was snowed up between Tow Law and Burnhill, and the 3.30 from Shildon stuck in a drift between Bishop Auckland and Etherley.

CARLISLE.—The drift on the Midland Railway near Dent was on the average 6 ft. deep, and traffic was stopped for 19 hours. Two day expresses from Carlisle to London were blocked at this point for 12 hours. The N.E.R. was blocked at Low Row. The most serious block occurred on the North British near New Castleton; both lines were impassable for nearly 10 miles, the S being between 6 and 8 ft. deep. Traffic was suspended at midday, and there seemed little prospect of resuming it before Saturday.

KIRKBY STEPHEN.—The 12.42 train from Darlington was stopped to clear the brakes before running down the descent to Kirkby Stephen, and while this was being done, the train was snowed up. The line from Darlington to Tebay was completely blocked.

BORDERS.—The North British line was blocked by drifts 8 ft. deep near New Castleton. The Border Counties line between Hexham and Newcastle also remained blocked.

HELENSBURGH.—A train from Fort William was snowed up at Corrour, and the afternoon train from Helensburgh ran into a drift at Glendouglas and left the metals.

NOTES ON THE FLOODS FROM THE NEWSPAPER PRESS.

THURSDAY, FEBRUARY 15TH.

TONBRIDGE.—The lower part of the town was flooded by the Medway.

STAVERTON.—A horse and 6 pigs were drowned and much damage was done.

BUCKFASTLEIGH.—The Merdle overflowed and wrought great destruction to property; many works were stopped, the Ashburton branch railway was much damaged, and traffic was stopped for two days. Between Staverton and Buckfastleigh over 200 sheep were drowned. Church Bridge was damaged, and the water was 4 ft. deep on the roads.

ASHBURTON.—Heaps of stones and mud were deposited in the main street, shops were flooded, and the water on the railway was level with the platform.

TAVISTOCK DISTRICT.—All along the Tavy and Tamar the floods did considerable damage. At New Quay and Morwellham the Tamar rose within a few inches of the great flood of 1891, houses being flooded to a depth of 4 ft. The river was highest about 2 a.m. on Friday.

TEIGNMOUTH.—Many low-lying houses in the town were flooded.

TEIGN VALLEY.—At Trusham Station the rails were covered, and trains stopped running after noon. At Kingsteignton the road to Newton Abbott was 4 ft. under water, the greatest depth in living memory.

NEWTON ABBOTT.—The river Lemon overflowed, and nearly every street in the town was flooded. At Richard's Court, which adjoins the Lemon, a man was carried off his feet by the flood and nearly drowned. The road between Newton and Kingsteignton was washed out to a depth of 5 ft.

BOVEY TRACEY.—Mails were delayed from midday, the railway at Teigngrace being destroyed.

CHUDLEIGH.—The Teign overflowed to an extent not seen for many years, and trains had difficulty in getting along the Teign Valley line. The Clam bridge at Bella Marsh was swept away and no trains could pass over the Teign Valley line on Friday until 6 p.m., when the line was repaired.

EXETER.—Many streets in St. Thomas are under water. Communication with Plymouth on the S.W.R. was resumed early on Friday morning, the water at Newbridge, just above Cowley Junction having fallen; but the Budleigh Salterton line was closed all day, the damage to the permanent way being considerable. Parts of Lympstone were submerged by the rush of water from Woodbury Hills.

CREDITON.—The rivers Yeo, Creedy and Culver were much flooded. At Culverley Bridge the road was covered to a depth of 4 ft. At Neaporday the railway was covered. At Creedy Bridge the roadway was submerged to a depth of 3 ft., and the main road at Downes Mills was covered with 4 ft. of water. The last train to Exeter which got through was that passing Crediton at 3.54, the line being submerged for 600 yards between St. Cyres and Cowley Junction.

OTTERY ST. MARY.—The river Otter was much swollen, and at Butt's Bridge there was 3 ft. of water on the road.

AXMINSTER.—The rivers Axe and Yart have not been so high for 15 years. The S.W.R. was blocked for some hours and traffic diverted over the G.W.R. The Simlix Bridge on the S.W.R., near the junction of the Axe and Yart, had its piles carried away, and the centre subsided. The bridge and permanent way were covered by the flood.

DARTMOOR.—Following the heavy S, a S.W. gale and heavy R set in. The rivers quickly overflowed. A large bridge near the workhouse at Okehampton was washed away.

HATHERLEIGH.—The roads to Highampton, North Lew, Okehampton and Meeth were impassable.

ST. COLOMB.—The river Retew, which runs parallel with the Retew branch of the G.W.R., washed the ballast from the line, and traffic was suspended. The new double-arched bridge at Retin fell, and a bridge belonging to the Wheal Remfry Clay Co. was washed down.

WALES.—The Towy overflowed and did much damage. At Llanelly cellars and kitchens in the main streets were flooded. The G.W.R. line was washed away at Whitland; Fishguard branch was also partially destroyed at Goodwick. A large pond at Crumlin overflowed and brought down a lot of debris on to the G.W.R., derailing a train, and blocking both lines for some hours.

ABERDARE.—The Dare overflowed, filling cellars and warehouses in the centre of the town. Two feet of water covered the main street between the Taff Vale and Great Western stations.

FRIDAY, FEBRUARY 16TH.

FARNHAM.—The river was greatly swollen, and rushed over the bridge in Bridge Square, the water stretching away through the meadows to Moor Park. In Church Lane the water rushed through the lower floor windows, and in Downing Street and Union Street the water covered the whole roadway.

GODALMING.—Bridge Road, for a distance of 50 yards, was submerged to a depth of 3 ft. In Borough Road the depth of water in places could not have been less than 5 or 6 ft. The flood reached up to the top of the old Boarden Bridge, and much of the Vicarage garden was under water.

GUILDFORD.—According to the records of the river Wey Navigation Compy., the river has not been so high since 1824, but in that year it rose 2 ft. higher. On Thursday night the river rose very rapidly, and by Friday morning many houses in Millmead were flooded, the water in some cases is said to have risen nearly to the ceiling of the lower rooms. Between 7 a.m. and 9 a.m. the water is said to have risen 2 ft., and invaded the High Street. The premises both sides of the road, and both sides of the bridge, were inundated. Only the crown of the bridge showed above water. Later in the morning the crown of the bridge was damaged by timber washed against it by the flood, and at 6 30 p.m. the bridge practically collapsed. The river rose between 9 and 10 ft. above the normal level. The water appears to have reached its highest point after 4 p.m., and by midnight had fallen a foot. Early in the day it was decided to suspend running the trains on the Brighton line between Guildford and Bramley, as the line was submerged, and traffic was suspended till Saturday afternoon.

SHALFORD.—The roadway between the Parish Church and the Vicarage was covered with 2 ft. 6 in. of water, and Broadford Bridge was demolished.

WOKING.—The whole length of the main street was submerged between 3 and 4 ft. Two bridges on the Send road, over the Wey, and a back-water, were so much damaged that temporary structures had to be erected.

ADDLESTONE.—All the lower portions of Addlestone were under water.

NORTHAMPTONSHIRE.—Floods prevail along the whole course of the Nene.

WIMBORNE.—The Wimborne magistrates could not sit, the court house being flooded.

KINGSBRIDGE.—On the Kingsbridge rail, at Garabridge Station, the water was 3 ft. deep. Traffic was suspended between Kingsbridge and Brent, after the 2.35 train on Thursday, and was not resumed until Monday.

BARNSTAPLE.—The Taw swept over the roadway at New Bridge, and rendered the road to Barnstaple impassable.

BATH.—The Avon rose 13 ft. in 24 hours, and reached its highest point about noon; 12 ft. above its ordinary level, or 4 ft. lower than in 1894. In the Dolemeads over 300 houses were flooded,

BRISTOL.—Several streets in the Baptist Mills district were flooded, and in Mina road the water was 3 ft. deep.

EVESHAM.—The Avon rose 7 ft. 3 in. above summer level.

WALES.—The river Severn is much swollen, and miles of land between Welsh-pool and Pool Quay are flooded.

SATURDAY, FEBRUARY 17TH.

WEST MOLESEY.—The Mole overflowed and entered many cottages. Along Walton Road there is 2 feet of water in the shops.

MAIDENHEAD.—The Thames rose more than a foot on Saturday night, to 5 feet above ordinary level. Bridge Road was flooded from Moor Arches to near the toll-gate. The promenade from Wilder's boathouse to Boulters Lock was submerged.

MONDAY, FEBRUARY 19TH.

STAINES.—The Thames has risen 5 feet above the ordinary level, and is higher than it has been since 1894.

MAIDENHEAD.—On Saturday night the water nearly reached the high water mark of 1894.

ST. IVES.—The Ouse rose so rapidly that many houses were flooded, the flood exceeding in height that of 1877.

BUDLEIGH SALTERTON.—Traffic on the Salterton and Tipton line was still suspended, a small bridge at East Budleigh having been swept away.

SOUTH LINCOLNSHIRE.—At Swaton the river Eau overflowed, and the water near the post-office was from 2 to 3 ft. deep.

TUESDAY, FEBRUARY 20TH.

EAST MOLESEY.—The river is level with the top of the lock, both gates of which are open, and the water has commenced to flow on to the road. At West Molesey the water is nearly 2 feet deep in the High Street.

WINDSOR.—At 9 a.m. the Thames was 5 ft. 6 in. above head water mark, which is about 18 in. below the great flood of 1894. At night the water was reported to have risen to 5 ft. 8 in.

MAIDENHEAD.—The tow-path from below Clieyden to Bray is for the most part under water. The Bath Road is flooded to a depth of 2 or 3 feet, and the floods are almost up to the Dumb Bell Hotel.

YORK.—There is over 10 ft. of water in the Ouse at York, the walks on the river banks are submerged, and some cellars are inundated.

MALTON.—The Rye and the Derwent are in full flood. At the County Bridge, Malton, the water is 10 ft. above summer level.

WEDNESDAY, FEBRUARY 21ST.

MAIDENHEAD.—Nearly 300 houses are more or less flooded.

ETON.—At Barnes Pool the official register showed that the flood was only about 2 ft. lower than in 1894.

MALTON.—At 8 p.m. the Derwent reached a height of 12 ft. 9 in. In Ryedale the roads are 3 to 4 ft. under water, and the N.E.R. is covered.

CLIMATOLOGICAL TABLE FOR THE BRITISH EMPIRE, SEPTEMBER, 1899.

STATIONS.	Absolute.				Average.				Absolute.		Total Rain.		Aver.
	Maximum.		Minimum.		Max.	Min.	Dew Point.	Humidity.	Max. in Sun.	Min. on Grass.	Depth.	Days.	
	Temp.	Date.	Temp.	Date.									
<i>(Those in italics are South of the Equator.)</i>	°		°		°	°	°	0-100	°	°	inches		
London, Camden Square	88·1	5	36·4	29	68·4	50·4	48·4	69	136·4	35·1	2·65	14	5·5
Malta.....	91·5	3	61·7	28	83·7	68·5	67·2	79	146·3	55·1	1·87	7	1·4
Cape of Good Hope ...	83·2	16	41·5	30	64·9	50·0	49·7	80	...	...	1·33	13	5·6
Mauritius.....	79·0	24	60·2	22	75·4	65·0	60·7	75	153·0	51·5	1·68	18	6·4
Calcutta	94·6	9	76·7	13b	90·8	79·1	77·7	81	155·5	71·0	8·94	11	6·9
Bombay.....	87·8	29	74·1	10	85·8	77·3	74·4	78	136·2	69·8	3·49	14	5·1
Ceylon, Colombo .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Melbourne.....	77·5	3	35·0	25	64·0	47·3	44·5	71	135·0	30·5	1·11	11	6·2
Adelaide	81·6	3	39·1	24	67·5	48·3	45·2	66	146·1	30·9	1·88	14	4·9
Sydney	82·5	16	49·0	29	68·8	54·8	51·3	69	130·9	39·2	1·90	9	4·5
Wellington	64·0	22a	38·0	29	58·8	46·2	41·9	69	118·0	30·0	3·62	10	4·0
Auckland .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Trinidad	93·0	29	68·0	Sev.	91·0	70·1	74·3	77	168·0	66·0	2·18	7	...
Grenada.....	88·8	7	69·8	21	84·9	75·5	71·8	75	154·0	...	5·31	13	1·5
Toronto.....	84·6	5	31·4	23	67·1	48·8	50·9	78	102·4	26·3	5·15	12	5·9
New Brunswick, Fredericton	79·2	18	24·9	24	66·1	44·1	45·2	64	...	...	2·34	8	5·5
Manitoba, Winnipeg..	82·5	9	17·0	29	65·9	39·5	...	72	...	...	·91	8	5·7
British Columbia, Esquimalt.....	...	...	...	...	...	...	...	...	...	...	...	...	...

a—and 26. b—and 24.

REMARKS.

MALTA.—Adopted mean temp. 74°·7, or 0°·3 below average. Mean hourly velocity of wind 7·2 miles, or 0·6 below average. Mean temp. of sea 77°·8. TSS on 17th, 24th and 26th. L on 10th, 13th, 22nd and 29th. H on 17th. J. F. DOBSON.

Mauritius.—Mean temp. of air equal to, of dew point 0°·8 above, and rainfall ·24 in. above, their respective averages. Mean hourly velocity of wind 11·8 miles, or 0·2 below the average; extremes, 28·9 on 5th, and 1·6 on 12th, 20th and 21st; prevailing direction, E.S.E. L and T at 4.40 a.m. on 21st. A. WALTER.

Adelaide.—Mean temp. of air 0°·8 above average; rainfall ·14 in. above average. Good rains and growing weather over the agricultural areas. C. TODD, F.R.S.

Sydney.—Temp. 3°·0 above, humidity 1·0 below, and rainfall 1·93 in. below, their respective averages. H. C. RUSSELL, F.R.S.

Wellington.—Fine in the early part of the month, with variable winds; the latter half showery, with prevailing N.W. winds, frequently strong. Severe hailstorm on 30th. Mean temp. 1°·6 above, and rainfall ·64 in. below, the average. R. B. GORE.

SUPPLEMENTARY TABLE OF RAINFALL,
MARCH, 1900.

Div.	STATION.	Total Rain.	Div.	STATION.	Total Rain.
		in.			in.
I.	Uxbridge, Harefield Pk..	'60	XI.	Builth, Abergwesyn Vic.	1'73
II.	Dorking, Abinger Hall .	1'02	"	Rhayader, Nantgwilt ...	1'30
"	Birchington, Thor	'99	"	Lake Vyrnwy	1'35
"	Hailsham	1'35	"	Corwen, Rhug	1'34
"	Ryde, Thornbrough	1'04	"	Criccieth, Talarvor	'96
"	Emsworth, Redlands ...	'78	"	I. of Anglesey, Lligwy..	'67
"	Alton, Ashdell	'94	"	I. of Man, Douglas	1'07
III.	Oxford, Magdalen Coll..	'44	XII.	Stoneykirk, Ardwell Ho.	'87
"	Banbury, Bloxham	'51	"	New Galloway, Glenlee	'40
"	Northampton, Sedgebrook	'64	"	Moniaive, Maxwellton Ho.	'32
"	Alconbury	'49	"	Lilliesleaf, Riddell	1'10
"	Wisbech, Bank House...	'60	"	N. Esk Res. [Penicuik]	1'60
IV.	Southend	'88	XIII.	Glasgow, Queen's Park..	'28
"	Colchester, Lexden	'98	XIV.	Inverary, Newtown	'55
"	Saffron Waldon, Newport	'84	"	Ballachulish, Ardsheal...	'48
"	Rendlesham Hall	'78	"	Islay	'40
"	Scole Rectory	1'09	XVI.	Dollar	1'53
"	Swaffham	'95	"	Balquhiddier, Stronvar...	'90
V.	Salisbury, Alderbury ...	1'35	"	Coupar Angus Station...	'91
"	Bishop's Cannings	1'61	"	Blair Atholl ...	...
"	Blandford, Whatcombe .	1'12	XVII.	Keith H.R.S.	2'44
"	Ashburton, Holne Vic...	2'76	"	Forres H.R.S.	2'09
"	Okehampton, Oaklands.	2'48	XVIII.	Fearn, Lower Pitkerrie..	1'28
"	Hartland Abbey	1'59	"	S. Uist, Askernish	1'04
"	Lynton, Glenthorne ...	1'22	"	Invergarry	'94
"	Probus, Lamellyn	2'92	"	Aviemore, Alvie Manse.	...
"	Wellington, The Avenue	1'12	"	Loch Ness, Drumnadrochit	1'31
"	North Cadbury Rectory	1'53	XIX.	Invershin	3'23
VI.	Clifton, Pembroke Road	1'28	"	Durness	2'47
"	Ross, The Graig	1'20	"	Watten H.R.S.	1'68
"	Wem, Clive Vicarage ...	'93	XX.	Dunmanway, Coolkelure	2'20
"	Wolverhampton, Tettenhall	'75	"	Cork, Wellesley Terrace	'78
"	Cheadle, The Heath Ho.	'65	"	Killarney, Woodlawn ..	1'31
"	Coventry, Priory Row ..	'69	"	Caber, Duneske	'73
VII.	Market Overton .....	...	"	Ballingarry, Hazelfort...	'57
"	Grantham, Stainby	1'11	"	Limerick, Kilcornan ...	1'00
"	Horncastle, Bucknall ...	'23	"	Miltown Malbay	1'59
"	Worksop, Hodsock Priory	'65	XXI.	Gorey, Courtown House	'75
VIII.	Neston, Hinderton	1'11	"	Moynalty, Westland ...	'65
"	Southport, Hesketh Park	'94	"	Athlone, Twyford	'45
"	Chatburn, Middlewood.	'87	"	Mullingar, Belvedere ..	'69
"	Duddon Val., Seathwaite Vic.	1'19	XXII.	Woodlawn	'69
IX.	Melmerby, Baldersby ...	'81	"	Crossmolina, Ennisiscoe..	2'03
"	Scalby, Silverdale	1'37	"	Collooney, Markree Obs.	'96
"	Ingleby Greenhow Vic..	1'93	XXIII.	Enniskillen, Model Sch.	'61
"	Middleton, Mickleton ...	'45	"	Warrenpoint	'95
X.	Haltwhistle, Unthank H.	'90	"	Seaforde	1'20
"	Bamburgh	2'14	"	Belfast, Springfield	1'12
"	Keswick, The Bank	'44	"	Bushmills, Dundarave..	'83
XI.	Llanfrechfa Grange	1'11	"	Stewartstown	'83
"	Llandovery	'84	"	Killybegs	1'61
"	Castle Malgwyn	1'70	"	Horn Head	1'27
"	Brecknock, The Barracks	...			

MARCH, 1900.

Div.	STATIONS. [The Roman numerals denote the division of the Annual Tables to which each station belongs.]	RAINFALL.					Days on which 40 or more fell.	TEMPERATURE.						No. of Nights below 32°
		Total Fall.	Differ- ence from average 1880-9.	Greatest Fall in 24 hours.		Max.		Min.		In shade. On grass.				
				Dpth	Date			Deg.	Date		Deg.	Date		
		inches.	inches.	in.										
I.	London (Camden Square) ...	.79	—	.82	.41	18	7	58·6	12	23·4	18	9 21	
II.	Tenterden	1·17	—	.62	.88	18	7	56·5	10	23·5	18	8 21		
III.	Hartley Wintney	1·21	...	...	.36	27	11	57·0	12	18·0	30	12 28	
IV.	Hitchin .....	.86	—	.48	.25	18	10	55·0	10d	21·0	17	20 ...	
V.	Winslow (Addington) .....	.66	—	1·06	.18	18a	11	57·0	10	21·0	18	14 18	
VI.	Bury St. Edmunds (Westley)	1·05	—	.50	.58	18	11	51·0	11	25·0	18	...		
VII.	Norwich (Brundall)	1·09	...	...	.43	18	22	55·4	12	23·2	18	15 28	
VIII.	Winterbourne Steepleton ...	2·13	...	...	.83	19	10	55·1	12	18·7	18	10 16	
IX.	Torquay (Cary Green)	1·91	...	...	...	...	...	...	...	...	...	...
X.	Polapit Tamar [Launceston]..	1·85	—	.68	.42	18	14	56·0	12	23·8	18	14 21		
XI.	Stroud (Upfield)	1·22	—	.97	.32	21	13	56·0	13	27·0	17	11 ...		
XII.	Churchstretton (Woolstaston)	1·00	—	1·13	.30	19	11	52·0	11	21·5	18	19 27		
XIII.	Worcester (Diglis Lock) .....	.83	—	.95	.26	19	9	...	...	...	...	...
XIV.	Boston .....	.38	—	1·16	.10	18	7	56·0	12c	25·0	18f	18 ...	
XV.	Hesley Hall [Tickhill] .....	.56	—	1·34	.15	27	13	54·0	31	25·0	17	13 ...	
XVI.	Breadsall Priory .....	.83	...	...	.23	19	10	...	...	...	...	...
XVII.	Manchester (Plymouth Grove) .....	.66	—	1·56	.17	27	8	61·0	11	23·0	16g	12 17	
XVIII.	Wetherby (Ribston Hall) ...	.73	—	1·33	.34	18	8	...	...	...	...	...
XIX.	Skipton (Arnccliffe) .....	.88	—	4·22	.29	18	13	...	...	...	...	...
X.	Hull (Pearson Park) .....	.48	—	1·57	.16	26	10	53·0	12	23·0	30	15 21	
XI.	Newcastle (Town Moor)	1·84	—	.79	.28	26	13	...	...	...	...	...
XII.	Borrowdale (Seathwaite) .....	.83	—	9·67	.24	15	10	...	...	...	...	...
XIII.	Cardiff (Ely)	1·12	—	1·86	.33	19	6	...	...	...	...	...
XIV.	Haverfordwest	1·43	—	1·81	.53	18	14	57·6	11	25·4	29	6 19		
XV.	Aberystwith (Gogerddan) ...	.68	—	2·30	.29	27	5	62·0	11	15·0	17h	25 ...	
XVI.	Llandudno .....	.88	—	1·20	.21	27	10	56·5	11	25·0	18	3 ...	
XVII.	Cargen [Dumfries] .....	...	...	...	...	...	...	...	...	...	...	...
XVIII.	Edinburgh (Blacket Place) ...	1 06	...	...	.26	19	10	54·8	14	21·1	18	14 18	
XIX.	Colmonell .....	.37	...	...	.27	27	4	59·0	11	23·0	17i	25 ...	
X.	Tighnabruach .....	.69	...	...	.41	27	5	50·0	14	25·0	16	18 ...	
XI.	Mull (Quinish) .....	.39	—	3·45	.08	11i	10	...	...	...	...	...
XII.	Loch Leven Sluices	1·10	—	1·87	.40	21	4	...	...	...	...	...
XIII.	Dundee (Eastern Necropolis)	1·25	—	1·15	.45	19	9	55·1	15	23·3	18	20 ...		
XIV.	Braemar	2·33	—	.31	.50	21	13	47·0	11	4·0	18	27 30		
XV.	Aberdeen (Cranford)	2·62	...	...	.60	19	25	56·0	11	8·0	17	16 ...	
XVI.	Cawdor (Budgate)	1·79	—	.25	.33	19	19	...	...	...	...	...
XVII.	Strathconan [Beaul]	4·14	—	.18	1·65	15	7	...	...	...	...	...
XVIII.	Glencarron Lodge	2·66	...	...	.60	14	19	50·9	31	11·0	18	20 ...	
XIX.	Dunrobin	2·51	+	.26	.82	19	17	52·5	14	19·0	18	10 ...		
X.	S. Ronaldshay (Roeberry) ...	1·94	—	.60	.60	19	25	50·0	11	21·0	17	11 ...		
XI.	Darrynane Abbey	1·64	...	...	.34	29	16	...	...	...	...	...
XII.	Waterford (Brook Lodge) ...	.99	—	1·91	.51	17	9	54·0	11	23·0	29	9 ...	
XIII.	Broadford (Hurdlestown) ...	.60	...	...	.19	31	10	...	...	...	...	...
XIV.	Carlow (Browne's Hill)	1·00	—	1·37	.47	17	13	...	...	...	...	...
XV.	Dublin (Fitz William Square) .....	.96	—	1·05	.23	19	13	53·5	11	27·1	17	6 14	
XVI.	Ballinasloe .....	.80	—	1·83	.23	18	15	53·0	31	27·0	17c	12 ...	
XVII.	Clifden (Kylemore)	2·70	...	...	...	...	...	...	...	...	...	...
XVIII.	Waringstown	1·00	—	1·35	.30	17c	5	52·0	8	21·0	18	13 21		
XIX.	Londonderry (Creggan Res.)	1·59	—	1·14	.33	15	15	...	...	...	...	...
X.	Omagh (Edenfel) .....	.79	—	1·72	.16	15	9	52·0	11	21·0	16	14 26	

+ Shows that the fall was above the average; — that it was below it.

a—and 27. b—and 14. c—and 19. d—and 13. e—and 31. f—and 29, 30.

g—and 17. h—and 26. i—and 28.

METEOROLOGICAL NOTES ON MARCH, 1900.

ABBREVIATIONS.—Bar. for Barometer; Ther. for Thermometer; Max. for Maximum; Min. for Minimum; T for Thunder; L for Lightning; TS for Thunderstorm; R for Rain; H for Hail S for Snow.

ENGLAND.

TENTERDEN.—A dry, cold month, with one very wet night. Less wind and sunshine than usual, yet the ground dried up in excellent condition for working. Duration of sunshine 110 hours 25 mins. Vegetation backward.

HARTLEY WINTNEY.—A remarkably cold, wintry month. For the first fortnight bitterly cold N.E. winds prevailed with sunless days. From 16th to 29th S storms occurred with a distant TS on 20th. Sharp frosts on 17th and 18th, and from 29th to 31st. There was absence of fog. R .56 in. below the average. Ozone on 14 days, with a mean of 4.

WINSLOW, ADDINGTON.—A dry, cold month, and only twice has there been less R in March during the last 30 years. A S storm occurred on the afternoon of 18th, and there was a covering of S on the mornings of 26th, 27th and 28th. Severe frosts occurred on 29th and 30th. Foggy on 21st.

BURY ST. EDMUNDS, WESTLEY.—A cold, wintry month with Northerly winds for 30 days. S on 18th, 25th and 27th.

NORWICH, BRUNDALL.—A monotonously cold month, and vegetation had hardly started at the close. Mean temp. $38^{\circ}4$, being the lowest recorded since 1892, when it was $36^{\circ}6$. S on 1st, 2nd, 17th, 19th, 26th and 27th. Distant T on 20th.

WINTERBOURNE STEEPLETON.—The month was excessively cold and ungenial. Mean temp. $38^{\circ}7$ or $3^{\circ}8$ below the average of 7 years. Everything is extremely backward, and spring apparently made no advance. S on 17th, 18th and 19th.

POLAPIT TAMAR [LAUNCESTON].—A dry, cold month. S on 16th, 17th and 18th, the fall on the latter day yielding .42 in.

STROUD, UPFIELD.—S fell daily from the 16th to the 19th, the fall being heavy on the 18th.

WOOLSTASTON.—A cold, backward month, with much frost. S fell on 8 days, being two inches deep on 16th. Mean temp. $37^{\circ}0$.

MANCHESTER, PLYMOUTH GROVE.—The coldest March for 32 years, with the exception of 1883 and 1887, and the driest in the same period, with the exception of 1893, when the rainfall was .65 in.

ARNCLIFFE VICARAGE.—The driest March for several years.

SEATHWAITE.—S 4 inches deep at 9 a.m. on the 18th, and $1\frac{1}{2}$ inches deep on 28th.

WALES.

HAVERFORDWEST.—The weather was generally cold and damp, with low night temp., the min. on grass falling below 32° on 19 nights, and there was very little bright sunshine. S fell on 4 days, being about five inches deep on 18th. The wind was mostly moderate to light in force. Agricultural operations are backward, and the country is not showing much sign of spring.

AEERYSTWITH, GOGERDDAN.—A very dry and cold month, with N. or N.E. wind almost throughout. Very little sunshine.

SCOTLAND.

EDINBURGH, BLACKET PLACE.—Mean temp. $1^{\circ}\cdot8$, rainfall 46 per cent., and sunshine 33 hours, below their respective averages. S on 8 days, heavy on 19th. Lunar halo on 17th. Solar halos on 27th and 31st.

COLMONELL.—R 2·98 in. below the average of 24 years, and the least in March during that period. Mean temp. $5^{\circ}\cdot4$ below average. S on 16th, 18th, 19th, 27th (heavy), and 28th.

TIGNABRUACH, CRAIGANDARAICH.—A month of low temp.; the mean max. being $43^{\circ}\cdot0$, and the mean min. $31^{\circ}\cdot6$. The bar. was above 30 in. on 22 days, and the rainfall was very small.

MULL, QUINISH.—A very cold month from first to last, with persistent N. and E. winds. The R is the smallest ever recorded here in any month, the nearest approach being May, 1876, when '66 in. fell on 7 days.

ABERDEEN, CRANFORD.—The month was very cold, wet and stormy.

S. RONALDSHAY, ROEBERRY.—The first part of the month was fine, the middle and latter parts were rough and cold with S storms. Mean temp. $37^{\circ}\cdot5$, or $1^{\circ}\cdot9$ below the average of 10 years.

IRELAND.

DARRYNANE ABBEY.—A fine, but cold month on the whole; wild with S from the 15th to the 26th.

WATERFORD, BROOK LODGE.—A very cold month, with harsh E. winds. Heavy S on the night of the 17th.

DUBLIN, FITZWILLIAM SQUARE.—A very dull and cold month. The earlier part was dry, but there were frequent falls of S, sleet or H after 15th; the total, however, is less than one inch. The amount of cloud was unusually large, being 7·4. Mean temp. $40^{\circ}\cdot8$, or $2^{\circ}\cdot3$ below the average. The temp. rose above 50° on only 5 days, the average being about 16. Fog on 6 days. High winds on 7 days, reaching the force of a gale on 15th and 18th. S or sleet on 5 days, and H on 6. T and L on 11th, and L on 19th and 25th.

WARINGSTOWN.—Dry, but very cold, with E. and N.E. winds.

OMAGH, EDENFEL.—The driest March, with the exception of 1892, in 35 years at least. Accompanied by a continuance of the polar or easterly winds, which have prevailed for 78 out of the 90 days of this quarter, and by a temp. some 3° below the average for the same period, this has proved trying alike to animal and vegetable vitality, and probably accounts for the unusual depression in the public health. It was, however, an unrivalled seed-time, and in this respect was fully taken advantage of.

ITALIAN METEOROLOGICAL SERVICE.

PROF. P. TACCHINI, having completed 40 years' service on September 1st, 1899, has retired from the office of Director of the Ufficio Centrale Meteorologico e Geodinamico, and is succeeded by Prof. Luigi Palazzo. Prof. Tacchini retains the control of the Osservatorio Astronomico dell Collegio Romano.